

ABSTRACT

A deployment control system provides controlled deployment of an embolic protection device which may include a guide wire, an expandable filter attached to the guide wire near its distal end, and a restraining sheath that maintains the expanded filter in a collapsed position. The deployment control system includes a torque control device which allows the physician to torque the guide wire into the patient's anatomy and a mechanism for preventing the guide wire from buckling as the restraining sheath is being retracted to deploy the expandable filter. A recovery control system for recovering the embolic protection device includes an inner catheter which extends within a lumen of an outer recovery sheath in a coaxial arrangement. A distal portion of the inner catheter extends beyond another recovery sheath during advancement of the recovery system into the vasculature. The recovery sheath can be advanced over the inner catheter to collapse the expandable filter. The proximal ends of the inner catheter and recovery sheath include handle portions having snap mechanisms which hold the components together as the recovery system is being advanced into the patient's vasculature.